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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/684,058	10/10/2003	Zebunnissa Ramtoola	3100-0009	3244

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EXAMINER	
SHEIKH, HUMERA N	

ART UNIT	PAPER NUMBER
1615	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/684,058	RAMTOOLA ET AL.	
	Examiner	Art Unit	
	Humera N. Sheikh	1615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 February 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-28* is/are pending in the application.

4a) Of the above claim(s) *13-28* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *3/1/04;4/12/04;4/14/06;2/9/07*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Status of the Application

Receipt of the Response to Election/Restriction requirement filed 02/09/07 and the Information Disclosure Statements filed 2/9/07; 4/14/06; 4/12/04 and 3/01/04 is acknowledged.

Applicant's election without traverse of Group I (claims 1-12) in the reply filed on 02/09/07 is acknowledged.

Claims 13-28 have been withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 02/09/07.

Claims 1-28 are pending in this action. Claims 13-28 have been withdrawn (non-elected invention). Claims 1-12 are being examined in this Office Action. Claims 1-12 are rejected.

Inventorship

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

* * * * *

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Faour (U.S. Patent No. 6,753,011).

The instant invention is drawn to a gastro-retentive dosage form of levodopa for oral administration to a patient in need thereof, said dosage form comprising: (a) a tablet comprising a therapeutically effective amount of levodopa, a binder, and a pharmaceutically-acceptable gas-generating agent capable of releasing carbon dioxide upon contact with gastric juice, and (b) an expandable, hydrophilic, water-permeable and substantially gas-impermeable, membrane surrounding the tablet, wherein the membrane expands as a result of the release of carbon

dioxide from the gas-generating agent upon contact with the gastric juice, whereby the dosage form becomes too large to pass into the patient's pyloric sphincter.

Faour ('011) teaches a controlled release delivery device, in the form of a tablet, wherein the device comprises:

a) a core located approximately at the center of the device and comprising at least one expandable, hydrophilic polymer and optionally an osmagent, the core being able to absorb and/or imbibe fluids from an environment of use;

b) a composition immediately surrounding the core comprising at least one active substance and optionally, an osmagent and/or an osmopolymer;

c) a membrane immediately surrounding the composition and comprising a mixture of a cellulose acylate (ester), a methacrylate salt copolymer and a plasticizer, wherein the membrane permits delivery of the at least one active substance through a combination of diffusion and osmotic pumping; and

d) at least one preformed passageway and plural micropores in the membrane that communicate the composition with the outside of the device (see reference column 3, line 20 – col. 4, line 13); (col. 20, lines 38-45).

In another aspect of the invention, the device comprises: a core expandable in a fluid from the environment of use, the core being approximately centrally located in the device; a layer comprising at least one first active agent, wherein the layer is in contact with and surrounds the core; and a membrane in contact with and surrounding the layer and comprising at least one preformed passageway for delivery of the at least one active agent by osmotic pumping and plural micropores for delivery of the at least one active agent by diffusion, and the membrane

further comprising one or more cellulose esters, one or more poly(methacrylate) copolymer salts and one or more plasticizers, wherein the membrane permits delivery of the at least one active substance through a combination of diffusion and osmotic pumping (col. 4, lines 14-32); Claim 1.

The device of the invention can optionally include an external coating comprising an active agent for immediate, rapid, slow, sustained, controlled or delayed delivery to the environment of use. Useful materials for the external coating include polyvinyl pyrrolidone (PVP), poly(ethylene glycol) (PEG), hydroxypropyl ethylcelluose and the like (col. 10, lines 48-64).

Active agents useful for the invention include anti-Parkinson compounds such as *levodopa and carbidopa* (col. 17, lines 20-22); (claim 16). The active agent may be provided in amounts of between 0.10 and 99.9% by weight of the active substance-containing layer (3) (col. 10, line 65 – col. 11, line 3).

Binders are included in the device and can comprise *methylcellulose, povidone, poly(ethylene glycol), poloxamers* (PLURONIC™ F68, PLURONIC™ F127), *polyvinyl pyrrolidone* and combinations thereof (col. 12, lines 37-58). These binders read on Applicant's claimed binders recited in claims 11 and 12.

Alkalizing or gas-generating agents are disclosed and include *sodium carbonate* and *sodium bicarbonate* (col. 11, lines 44-57). These alkalizing agents read on Applicant's gas-generating agents recited in claims 9 and 10.

Additional components disclosed include *glyceryl monostearate* and *glycerol palmitostearate* (col. 14, lines 44-55).

For oral, buccal and sublingual administration, the delivery device may be in the form of a *caplet or tablet*. The device is preferably a tablet (col. 20, lines 38-45).

If desired, the device can be coated with a finish coating to provide the desired shine, color, taste or other aesthetic characteristics (col. 20, line 66 – col. 21, line 3).

The examples at columns 21-26 demonstrate various preparations of controlled release devices of the invention.

Figure 1(a) depicts an oral dosage form device (1) comprising an approximately centrally located core (2) comprising an expandable hydrophilic polymer composition capable of absorbing, or imbibing fluids. The core (2) is surrounded by and in contact with a layer (3), which comprises at least one active agent and optionally an osmotically effective solute. The layer (3) is surrounded by and in contact with a wall (4) having pores (not shown) and a preformed passageway (5). The device delivers the active agent by diffusion and osmotic pumping. The wall (4) is preferably physiologically inert and preserves its physical and chemical integrity during delivery of the active agents comprised in the layer (3) (col. 6, lines 22-44).

Figure 1(b) depicts the device of Fig. 1(a) in operation delivering the active agent in the layer (3). During operation, the hydrophilic polymer composition of the core (2) absorbs fluid that enters the device (1) across the wall (4) and swells, or expands. Fig. 1(b) depicts the enlarged core pushing the active agent through the wall and passageway (col. 6, lines 45-50).

Faour teaches suitable membrane or wall materials (4), such as that disclosed at column 8, line 53 – col. 9, line 46 (cellulose esters, copolymers of methacrylate salts). It is noted that Faour does not teach the membrane to be polyvinyl alcohol in the claimed amounts (between

40% and 85%). However, it would have been obvious to one of ordinary skill in the art to utilize any effective membrane material to serve as a diffusion means by which active agent is delivered. Furthermore, Applicants have not established any superior results attributable to the claimed membrane material. The selection of effective membrane material(s) is within the level of the skilled artisan.

While Faour do not explicitly teach the ratio of levodopa to carbidopa claimed (about 4:1 and about 10:1), it is the position of the Examiner that absent any showing of unexpected results, which accrue from the claimed weight ratios, the determination of suitable or effective ratios would be within the level of one of ordinary skill in the art, using routine or manipulative experimentation to obtain optimal results, as these are variable parameters attainable within the art. Moreover, the Examiner points out that generally, differences in concentration will not support the patentability of subject matter encompassed by the prior art unless there is evidence indicating such concentration or temperature is critical. "[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation." *In re Aller,* 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955). In this instance, the prior art vividly teaches the use of the same drugs (levodopa/carbidopa), formulated in a similar-structured device (expandable, osmotic device), having the same components (binders, membrane, gas-generating agents, etc.) for use in the same field of endeavor as that desired by Applicants.

Thus, given the teachings of Faour delineated above, the instant invention, when taken as a whole, would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made.

Conclusion

- No claims are allowed at this time.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Humera N. Sheikh whose telephone number is (571) 272-0604. The examiner can normally be reached on Monday through Friday during regular business hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Woodward, can be reached on (571) 272-8373. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have any questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Humera N. Sheikh

Primary Examiner

Art Unit 1615

April 28, 2007

HUMERA N SHEIKH
PRIMARY EXAMINER
TC-1600

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